

AMENDMENTS

IN THE CLAIMS:

1. (currently amended) A flip-chip light emitting diode package structure, comprising:

a submount having a first surface and a second surface opposite to the first surface, a plurality of grooves on sidewalls of the submount;

a first patterned conductive film on a first part of the first surface, a first part of the second surface and on a part of an inner wall of the grooves;

a second patterned conductive film on a second part of the first surface, a second part of the second surface and a remaining part of the inner wall of the grooves; and

at least two light emitting diode (LED) chips on the submount, wherein each of the LED chips has two electrodes electrically connecting with the first and second patterned conductive films, respectively,

wherein at least one of the first patterned conductive film and the second patterned conductive film is commonly used by the LED chips,

wherein no integrated circuit (IC) chip is connected to the first patterned conductive film and the second patterned conductive film.

2. (original) The flip-chip light emitting diode package structure of claim 1 further comprising two bumps disposed between the electrodes of the LED chip and the first patterned conductive film and the second patterned conductive film.

3. (previously presented) The flip-chip light emitting diode package structure of claim 1, wherein m is a number of the grooves that are on a first sidewall of the submount and n is a number of the grooves that are on a second sidewall of the submount, wherein at least one of m and n is greater than or equal to two.

4. (original) The flip-chip light emitting diode package structure of claim 3, wherein the first sidewall and the second sidewall are adjacent to each other.

5. (original) The flip-chip light emitting diode package structure of claim 3, wherein the first sidewall and the second sidewall are opposite to each other.

6. (original) The flip-chip light emitting diode package structure of claim 3, wherein m is not equal to n .

7. (original) The flip-chip light emitting diode package structure of claim 3, wherein m is equal to n .

8. (original) The flip-chip light emitting diode package structure of claim 3, wherein m is 1 and n is 1.

9. (original) The flip-chip light emitting diode package structure of claim 1, wherein the grooves are on disposed on a sidewall at a corner of the submount.

10. (previously presented) The flip-chip light emitting diode package structure of claim 2, wherein the bumps comprise a Sn-Pb alloy, a Sn-Au alloy or Au.

11. (original) The flip-chip light emitting diode package structure of claim 1, wherein the submount comprises a material selected from the group consisting of aluminum nitride, boron nitride and zinc oxide.

12. (currently amended) A flip-chip light emitting diode package structure, comprising:
a submount having a first surface and a second surface opposite to the first surface, an indentation on the first surface, a plurality of grooves on a first sidewall and a second sidewall of the submount;

a first patterned conductive reflection film disposed on a first part of the first surface, a first part of the second surface, a first part of a sidewall of the indentation, a first part of a bottom of the indentation and a part of an inner wall of the grooves;

a second patterned conductive reflection film on a second part of the first surface, a second part of the second surface, a second part of the sidewall of the indentation and a second part of the bottom of the indentation, and a remaining part of the inner wall of the grooves; and

at least two light emitting diode (LED) chips inside the indentation of the submount, wherein each of the LED chips has two electrodes electrically connecting with the first patterned conductive film and the second patterned conductive film, respectively,

wherein at least one of the first patterned conductive film and the second patterned conductive film is commonly used by the LED chips,

wherein no integrated circuit (IC) chip is connected to the first patterned conductive film and the second patterned conductive film.

13. (original) The flip-chip light emitting diode package structure of claim 12, further comprising two bumps disposed between the electrodes of the LED chip, and the first patterned conductive reflection film and the second patterned conductive reflection film.

14. (previously presented) The flip-chip light emitting diode package structure of claim 12, wherein m is a number of the grooves that are on the first sidewall of the submount and n is a

number of the grooves that are on the second sidewall of the submount, wherein at least one of m and n is greater than or equal to two.

15. (original) The flip-chip light emitting diode package structure of claim 14, wherein the first and the second sidewalls are next to each other.

16. (original) The flip-chip light emitting diode package structure of claim 14, wherein the first and the second sidewalls are opposite to each other.

17. (original) The flip-chip light emitting diode package structure of claim 14, wherein m is not equal to n.

18. (original) The flip-chip light emitting diode package structure of claim 14, wherein m is equal to n.

19. (original) The flip-chip light emitting diode package structure of claim 14, wherein m is 1 and n is 1.

20. (original) The flip-chip light emitting diode package structure of claim 12, wherein the grooves are disposed on a sidewall at a corner of the submount.

21. (currently amended) The flip-chip light emitting diode package structure of claim 13, wherein the bumps ~~[[comprises]]~~comprise a Sn-Pb alloy, a Sn-Au alloy or Au.

22. (original) The flip-chip light emitting diode package structure of claim 12, wherein the submount comprises a material selected from the group consisting of aluminum nitride, boron nitride or zinc oxide.

23. (original) The flip-chip light emitting diode package structure of claim 12, wherein an angle formed between the sidewall and the bottom of the indentation is an obtuse angle.

Claims 24-25. (cancelled)

26. (new) The flip-chip light emitting diode package structure of claim 3, wherein at least one of m and n is greater than 1.

27. (new) The flip-chip light emitting diode package structure of claim 12, wherein at least one of m and n is greater than 1.